ifm electronic

CE

Operating instructions
(Safety-related part ATEX and IECEx)
Inductive NAMUR sensors

UK

NN504A
NN505A

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80001940/00

Remarks for safe use in hazardous areas

Functions and features

Use in hazardous areas according to the classification

II 1G / 2G (Group II, category 1G / 2G, apparatus for gas atmosphere).

The requirements of the standards IEC 60079-0:2011 + Corr 2012, IEC 60079-11:2011 and IEC 60079-26:2006 + Corr 2009 are met.

Use in hazardous areas according to the classification

II 1D (group II, category 1D, apparatus for dust atmosphere).

The requirements of the standards IEC 60079-0:2011 + Corr 2012, IEC 60079-11:2011 and IEC 60079-26:2006 + Corr 2009 are met.

EC Type Test Certificate

BVS 14 ATEX E 005 X

IECEx type examination certificate

IECEx BVS 14.0005X

- Marking

II 1G Ex ia IIB T4 Ga	Ta: -25...70°C
II 2G Ex ia IIC T4 Gb	Ta: -25...70°C
II 1D Ex ia IIIB T135°C Da	Ta: -25...70°C

Installation / set-up

The units must only be installed, connected and set up by qualified staff. The qualified staff must have knowledge of types of protection, regulations and provisions for apparatus in hazardous areas.

Check whether the classification (see "Marking" above and marking on the unit) is suitable for the application.

Sensor connection

Only to intrinsically safe certified circuits or evaluation amplifiers which do not exceed the following maximum values of the units.

Ui = 15 V, Ii = 50 mA, Pi = 120 mW

Actuator wiring

Only to intrinsically safe certified circuits of solenoid valves that do not exceed the following maximum values of the units. Also observe the technical data sheet.

Ui = 28 V, Ii = 250 mA,
Pi = 750 mW (up to 40 °C), Pi = 650 mW (up to 70 °C)

For use in gas atmosphere (Group II), the following values are admissible and may not be exceeded.

Ui = 28 V, Pi = 1.1 W

- NN504A and NN505A: Terminal block wiring

Terminal 1	Terminal 2	Terminal 3	Terminal 4
A2 sensor 2	L+ sensor 2	A1 sensor 1	L+ sensor 1

Terminal 5	Terminal 6	Terminal 7	Terminal 8
Solenoid valve connection Ex-i IN +	Solenoid valve connection Ex-i IN -	Solenoid valve connection OUT +	Solenoid valve connection OUT -

- NN505A: Wiring diagram M12 connector

Pin 1	Pin 2	
Solenoid valve connection OUT + brown	Solenoid valve connection OUT - white	

- Maximum effective internal inductance (L_i) and capacitance (C_i) per sensor:

Article no.	Internal inductance L_i (total) in µH	Internal capacitance C_i (total) in nF
NN504A	130	60
NN505A	130	60

Installation remarks / mounting

- Adhere to the relevant national regulations and provisions.
- The relevant installation regulations must be adhered to.
- Protect the units efficiently against damage.
- To avoid electrostatic charging, steps must be taken to ensure the equalisation of potential of metal parts (plug housing, fixing elements, etc.).
- Please use cable glands or screw plugs that guarantee at least housing protection rating IP20 for connection. Using cable gland E12208 and protective cap E12209 from ifm electronic, the housing reaches protection rating IP67 in case of correct installation. This combination is tested with regard to electrostatics. If you use different cable glands or protective caps, please pay attention to the electrostatics of this combination.
- The M12 socket mounted to the NN505A is only for connection with the actuator output.
- Only use cables with an insulation resistance of at least 500 V between the separate intrinsically safe circuits.
- The units must not be installed in the partition between different zones.

Avoid electrostatic charging on housings and cables.

Maintenance / repair

The unit must not be modified nor can it be repaired. In case of a fault, please contact the manufacturer.

Data sheets, EC declaration of conformity and EC type examination certificates are available from the manufacturer on request.

To view the IECEx certificate online, please visit www.iecex.com.